

10/774,234

interoffice
M E M O R A N D U M

to: Application File (10/486,443)
from: Cynthia Kratz *CMK*
subject: original documents 05 Feb 2004
date: August 2, 2005

The attached documents are the original national stage papers filed by applicants on 05 Feb. 2005 and decision on petition to revive mailed on 29 March 2005. The application is a duplicate of 10/774,234.

See: August 2005 decision on petition to combine files filed on 06 May 2005.

TRANSMITTAL LETTER (General - Patent Pending)				Docket No. 0112	
In Re Application Of: Stackenwalt et al.					
Application No. 10/486,443 10/774,234	Filing Date 7/19/2002	Examiner Johnson, Anita D.	Customer No. 00112	Group Art Unit 2914	Confirmation No. 7845
Title: CANOPY-LIKE DECORATIVE STRUCTURE					

COMMISSIONER FOR PATENTS:

Transmitted herewith is:

Petition to Combine Files
Return Post Card

in the above identified application.

☒ No additional fee is required.

☐ A check in the amount of _____ is attached.

☒ The Director is hereby authorized to charge and credit Deposit Account No. 012400 as described below.

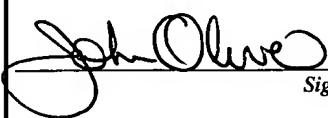
☐ Charge the amount of _____

☒ Credit any overpayment.

☒ Charge any additional fee required.

☐ Payment by credit card. Form PTO-2038 is attached.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.



Signature

John M. Olivo
Reg. No. 51,004

Dated: May 4, 2005

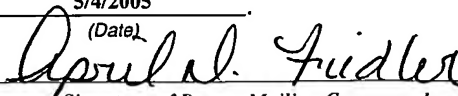
RECEIVED

10 MAY 2005

Legal Staff
International Division

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on 5/4/2005

(Date)



Signature of Person Mailing Correspondence

April D. Fiedler

Typed or Printed Name of Person Mailing Correspondence

cc:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:)	
)	Examiner: Johnson, Anita D.
Stackenwalt et al.)	
)	Art Unit: 2914
Serial Nos.: 10/486,443)	
10/774,234)	Confirmation No.: 7845
)	
International Appl. No. PCT/US02/23040)	Customer No.: 00112
)	
I.A. Filing Date: July 19, 2002)	Docket No.: 0112
)	
For: CANOPY-LIKE DECORATIVE)	
STRUCTURE)	

Mail Stop PCT
ATTN: PCT Legal Office
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

PETITION TO COMBINE FILES

Sir:

Applicants wish to bring to the attention of the Patent and Trademark Office that serial numbers 10/486,443 and 10/774,234 appear to correspond to the same application: namely, International Application PCT/US02/23040.

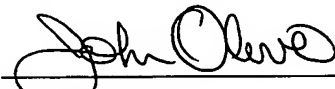
By way of this Petition, we respectfully request that the PCT Legal Office review the matter and request that the files corresponding to serial numbers 10/486,443 and 10/774,234 be combined into a single application.

Appl. No. Serial Nos.: 10/486,443 and 10/774,234
Corres. to International Appl. No. PCT/US02/23040
Petition dated May 4, 2005

Should this Petition be granted, Applicants request that the Patent and Trademark
Office set forth the status of the application and advise Applicants as to any outstanding
Official Action.

Respectfully submitted,

5/4/05
Date



John M. Olivo
Registration No. 51,004

Armstrong World Industries, Inc.
P.O. Box 3001
Lancaster, PA 17604
(717) 396-2629 (Telephone)
(717) 396-6121 (Facsimile)



COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. Box 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

John M. Olivo
Armstrong World Industries, Inc.
2500 Columbia Avenue
P.O. Box 3001
Lancaster, PA 17604-3001

In re Application of	:	
STACKENWALT, Richard ET AL.	:	
Application No.: 10/486,443	:	
PCT Application No.: PCT/US02/23040	:	DECISION ON
International Filing Date: 19 July 2002	:	
Priority Date: 19 July 2001	:	PETITION
Attorney Docket No.: 0112	:	
For: CANOPY-LIKE DECORATIVE	:	UNDER 37 CFR 1.137(b)
STRUCTURE	:	

Applicants' "Petition For Revival of an International Application For Patent Designating the U.S. Abandoned Unintentionally Under 37 CFR 1.137(b)," filed in the United States Patent and Trademark Office on 05 February 2004 is GRANTED.

BACKGROUND

On 19 July 2002, applicants filed international application number PCT/US02/23040, claiming priority of an earlier U.S. provisional application, filed on 19 July 2001. The United States of America was designated in the Request. A copy of the international application was transmitted by the International Bureau on 30 January 2003. The thirty month period for paying the basic national fee in the United States expired at midnight on Monday, 19 January 2004, with the result that the international application became abandoned as to the United States of America on that date.

On 05 February 2004, the present petition to revive was submitted with the required \$1330.00 petition fee. On 05 February 2004, applicants also filed a transmittal letter for entry into the national stage in the United States, accompanied by, *inter alia*, the basic national fee and a copy of the application.

DISCUSSION

A petition to revive an abandoned application under 37 CFR 1.137(b) must be filed without intentional delay from the time the application became abandoned and/or applicant first became aware of the abandoned status of the application. A petition under 37 CFR 1.137(b) must be accompanied by (1) a statement that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition was unintentional, (2) a proposed response,

(3) the petition fee required by law (37 CFR 1.17(m)), and (4) a terminal disclaimer and fee (if the international application was filed prior to June 8, 1995).

With regard to item (1) above, applicants' statement that "[t]he entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional," satisfies the requirements of 37 CFR 1.137(b)(3).

With regard to item (2) above, applicants filed national stage filing papers and fees on 05 February 2004.

With regard to item (3) above, applicants have provided the required petition fee.

With regard to item (4), a terminal disclaimer is not required as application was filed after 08 June 1995.

Accordingly, all requirements under 37 CFR 1.137(b) have been satisfied.

A review of the application file reveals that, while applicants have satisfied the requirements of 37 CFR 1.137(b), the requirements of 35 USC 371(c) for entry into the national phase have not been met. Particularly, applicants have failed to provide an inventor oath or declaration.

CONCLUSION

The petition to revive the application abandoned under 37 CFR 1.137(b) is GRANTED as to National Stage in the United States of America.

The application has an international filing date of 19 July 2002 under 35 U.S.C. 363.

This application is being forwarded to the National Stage Processing Division of the Office of the PCT Operations for continued processing, including the mailing of a PCT/DO/EO/905 (371 Notice of Missing Requirements) that indicates failure to provide an inventor oath or declaration.



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Detailee
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Richard Cole
PCT Legal Examiner
Office of PCT Legal Administration
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Facsimile: (703) 308-6459



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/486,443	Stackenwalt et al	0112

INTERNATIONAL APPLICATION NO.

PCT/US02/23040

I.A. FILING DATE	PRIORITY DATE
------------------	---------------

07/19/2002

112
ARMSTRONG WORLD INDUSTRIES, INC.
LEGAL DEPARTMENT
P. O. BOX 3001
LANCASTER, PA 17604-3001

CONFIRMATION NO. 7845

371
ABANDONMENT/TERMINATION
LETTER



OC000000015215545

Date Mailed: 02/17/2005

NOTIFICATION OF ABANDONMENT

The United States Patent and Trademark Office in its capacity as a Designated / Elected Office (37 CFR 1.495) has made the following determination:

- Applicant has failed to respond to the notification of MISSING REQUIREMENTS (Form PCT/DO/EO/905), mailed 04/28/2004 within the time period set therein.

Therefore, the above identified application failed to meet the requirements of 35 U.S.C. 371 and 37 CFR 1.495, and is ABANDONED AS TO THE UNITED STATES OF AMERICA.

ANITA D JOHNSON

Telephone: (703) 308-9140 EXT 226

PART 3 - OFFICE COPY

FORM PCT/DO/EO/909 (371 Abandonment Notice)



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/486,443	Stackenwalt et al	0112

John M Olivo
 Armstrong World Industries, Inc
 2500 Columbia Avenue
 P O Box 3001
 Lancaster, PA 17604-3001

INTERNATIONAL APPLICATION NO.	
PCT/US02/23040	
I.A. FILING DATE	PRIORITY DATE
07/19/2002	

CONFIRMATION NO. 7845
 371 FORMALITIES LETTER



OC000000012459796

Date Mailed: 04/28/2004

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 02/05/2004
- Copy of the International Search Report filed on 02/05/2004
- Copy of references cited in ISR filed on 02/05/2004
- U.S. Basic National Fees filed on 02/05/2004

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

ANITA D JOHNSON

Telephone: (703) 305-3661

PART 2 - OFFICE COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/486,443	PCT/US02/23040	0112

FORM PCT/DO/EO/905 (371 Formalities Notice)

PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 2003

Application or Docket Number

10/486,443

CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	16 minus 20 = *	
INDEPENDENT CLAIMS	2 minus 3 = *	
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	
XS 9=	
X43=	
+145=	
TOTAL	

RATE	FEE
BASIC FEE	730
XS18=	
X86=	
-290=	
TOTAL	730

CLAIMS AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

SMALL ENTITY

OR OTHER THAN SMALL ENTITY

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XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
	Independent	*	Minus	***	=
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>				

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XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
XS18=	
X86=	
+290=	
TOTAL ADDIT. FEE	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	*	Minus	**	=
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RATE	ADDITIONAL FEE
XS 9=	
X43=	
+145=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
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X86=	
+290=	
TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than "20", enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

**MULTIPLE DEPENDENT CLAIM
FEE CALCULATION SHEET**
(FOR USE WITH FORM PTO-875)

SERIAL NO.

10/486,443

FILING DATE

APPLICANT(S)

CLAIMS

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT	
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TOTAL DEP.	14	←		←		←
TOTAL CLAIMS	16					

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100						
TOTAL IND.		↓		↓		↓
TOTAL DEP.		←		←		←
TOTAL CLAIMS						

PATENT APPLICATION SERIAL NO.

10/486,443

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

Adjustment date: 03/30/2004 SHAJARRO
02/11/2004 SSANDARA 00000027 10774234
~~01 FC:1001~~ ~~770.00~~ GP

03/30/2004 SHAJARRO 00000139 10486443
01 FC:1609 730.00 GP

Repln. Ref: 03/30/2004 SHAJARRO 0014332700
DAB:012400 Name/Number:10486443
FC: 9204 \$40.00 CR

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

02/11/2004 SSANDARA 00000027 10774234

01 FC:1001

770.00 0P

PTO-1556
(5/87)

Selected Payment

Type: Check, BRC: 021309379, Acct. Nb.: 601853419, Nb.: 171334

Amount: 2100.00

Accounting Date: 02/11/2004

Created By: SSANDARA

Batch No.: 1

Seq. No.: 11472201

Status: A

Type

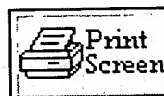
Amount A

Sale Nb: 36 , Nm./Number: PCT/US02/23040
Sale Nb: 27 , Nm./Number: 10774234

1330.00 LI
770.00 S

Show Items

Show Transactions



U. S. Patent & Trademark Office
Worksheet for Processing Multiple Fee Payments
(Suspended Amounts)

Accounting Date Processed **CUSTOMER #**
02-11-04 10-774239

(FROM:) Location:	RAM UserID	Amount Suspended	(TO:) Location:	Date Sent
CIPE	Sandara	\$1330	PCT	2-10-04

DT18 Rec'd PCT/PTO 10/486443 5 FEB 2004

DO/ EO WORKSHEET

Paralegal/ National Stage Division

U.S. Appl. No. 10/486,443

International Appl. No. 4502/23040

Application filed by : ☒ 30 months

WIPO PUBLICATION INFORMATION :

Publication No.: W003 008729

Publication Language : ☒ English ☐ German ☐ French ☐ Japanese
☐ Russian ☐ Korean ☐ Other : _____

Publication Date : 30 JAN 03

Not Published : ☐ U.S. only designated ☐ EP request

Published : ☐ EP request

INTERNATIONAL APPLICATION PAPERS IN THE APPLICATION FILE :

- | | |
|--|---|
| <input checked="" type="checkbox"/> International Application | <input type="checkbox"/> Request form PCT/RO/101 |
| <input type="checkbox"/> Article 19 Amendments | <input type="checkbox"/> PCT/ISA/210 - Search Report |
| <input type="checkbox"/> PCT/IB/331 | <input checked="" type="checkbox"/> Search Report References |
| <input type="checkbox"/> PCT/IPEA/409 IPER (PCT/IPEA/416 on front) | <input checked="" type="checkbox"/> PCT/IB/306 - Notification of a Change |
| <input type="checkbox"/> Annexes to 409 (Article 34 Amendment) | <input type="checkbox"/> Other : _____ |
| <input type="checkbox"/> Priority Document (s) No. _____ | |

RECEIPTS FROM THE APPLICANT:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Basic National Fee (or authorization to charge) | <input type="checkbox"/> Preliminary Amendment(s) Filed on :
1. _____ 2. _____ 3. _____ |
| <input checked="" type="checkbox"/> Description | <input type="checkbox"/> Information Disclosure Statement(s) Filed on :
1. _____ 2. _____ 3. _____ |
| <input checked="" type="checkbox"/> Claims | <input type="checkbox"/> Assignment Document (forwarded to Assignment Branch) |
| <input checked="" type="checkbox"/> Drawing Figure(s) - (# of dwgs. <u>6</u>) | <input type="checkbox"/> Assignee PG Publication Notice |
| <input type="checkbox"/> Translation of Article 19 Amendments
<input type="checkbox"/> entered <input type="checkbox"/> not entered :
<input type="checkbox"/> not a page for page substitution
<input type="checkbox"/> replaced by Article 34 Amendment | <input type="checkbox"/> Substitute Specification Filed on :
1. _____ 2. _____ |
| <input type="checkbox"/> Translation of Annexes to 409
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<input type="checkbox"/> not a page for page substitution
<input type="checkbox"/> other : _____ | <input type="checkbox"/> Verified Small Status Statement (executed) |
| <input type="checkbox"/> Application Data Sheet | <input type="checkbox"/> Oath/ Declaration (executed)
<input type="checkbox"/> surcharge was paid at the time of filing |
| <input type="checkbox"/> Power of Attorney <input type="checkbox"/> Change of Address | <input type="checkbox"/> DNA Diskette <input type="checkbox"/> Sequence Listing |
| | <input type="checkbox"/> Other : 1. _____ |
| | <input type="checkbox"/> Other : 1. _____ |

NOTES : ☐ I.A. used as Specification ☐ Other :

35 U.S.C. 371 - Receipt of Request

Date Acceptable Oath/ Declaration Received

Date of Completion of requirements under 35 U.S.C. 371(c)(1), (c)(2) and (c)(4)

Date of Completion of ALL requirements under 35 U.S.C. 371

Date of Completion of DO/ EO 903 - Notification of Acceptance

Date of Completion of DO/ EO 905 - Notification of Missing Requirements

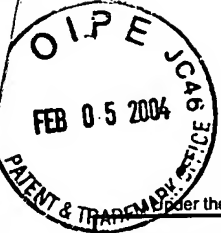
Date of Completion of DO/ EO 916 - Notification of Defective Response

Date of Completion of DO/ EO 909 - Notification of Abandonment

☐ EP ☐ JP ☐ SE ☐ AU ☐ US ☐ _____

02-06-04

020 Rec'd PCT/PTO 05 FEB 2004
10/774,234
10/486443 #2



PTO/SB/64/PCT (06-03)
Approved for use 12/31/2003. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PETITION FOR REVIVAL OF AN INTERNATIONAL APPLICATION FOR PATENT DESIGNATING THE U.S. ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)	Docket Number (Optional) 0112
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First Named Inventor: Stackenwalt et al.

International (PCT) Application No.: PCT/US02/23040

U.S. Application No.:
(if known)

Filed: July 19, 2002

Title: Canopy-Like Decorative Structure

Attention: PCT Legal Staff
Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

The above-identified application became abandoned as to the United States because the fees and documents required by 35 U.S.C. 371(c) were not filed prior to the expiration of the time set in 37 CFR 1.494(b) or (c) or 1.495(b) or (c) as applicable. The date of abandonment is the day after the date on which the 35 U.S.C. 371(c) requirements were due. See 37 CFR 1.494(g) or 1.495(h).

02/12/2004 LANDGRA 00000036 PCT/US02/23040

02 FC:1453

1330.00 OP

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION

Adjustment date: 03/30/2004 SHAJARRO

02/12/2004 LANDGRA 00000036 PCT/US02/23040
01 FC:1453

1330.00 OP

- requires the following items:
- (1) Petition fee
 - (2) Proper reply
 - (3) Terminal disclaimer with disclaimer fee which is required for all international applications having an international filing date before June 8, 1995; and
 - (4) Statement that the entire delay was unintentional.

1. Petition fee

☐ Small entity- fee \$ _____ (37 CFR 1.17(m)). Applicant claims small entity status.
See 37 CFR 1.27.

☒ Other than small entity - fee \$ 1,330.00 (37 CFR 1.17(m))

03/30/2004 SHAJARRO 00000139 10486443

2. Proper reply

02 FC:1453

1330.00 OP

A. The proper reply (the missing 35 U.S.C. 371(c) requirement(s)) in the form of
Utility Application (identify type of reply):

☐ has been filed previously on _____.

☒ is enclosed herewith.

This collection of information is required by 37 CFR 1.137(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

3. Terminal disclaimer with disclaimer fee


- ☒ Since this international application has an international filing date on or after June 8, 1995, no terminal disclaimer is required.
- ☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$ _____ for a small entity or \$ _____ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

4. Statement. The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

February 5, 2004

Date



Signature

(717) 396-2629

Telephone Number

John M. Olivo

Typed or Printed Name

Armstrong World Industries, Inc.
2500 Columbia Avenue

Address

P. O. Box 3001
Lancaster, PA 17604-3001

Address

51,004

Registration Number, if applicable

Enclosures: ☐ Response

☒ Fee Payment

☐ Terminal Disclaimer

☒ Utility Application

OT20 Rec'd PCT/PTO 05 FEB 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Stackenwalt et al.

For: Canopy-Like Decorative Structure

CERTIFICATE OF EXPRESS MAIL

Attention: PCT Legal Staff
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Petition for Revival
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Informal Drawings (6 sheets)
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Respectfully submitted,



John M. Olivo
Reg. No. 51,004

Date: February 5, 2004

ARMSTRONG WORLD INDUSTRIES, INC.
2500 Columbia Avenue
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TRANSMITTAL LETTER
 (General - Patent Pending)

 Docket No.
 0112

Re Application Of: Stackenwalt et al.

 Serial No.
 PCT/US02/23040

 Filing Date
 July 19, 2002

Examiner

Group Art Unit

Title: Canopy-Like Decorative Structure

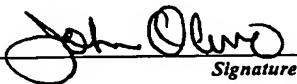
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Petition for Revival
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TRANSMITTAL LETTER
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Docket No.

0112

10/486443
10/774,234

In Re Application Of: Stackenwalt et al.

 Serial No.
 PCT/US02/23040

 Filing Date
 July 19, 2002

Examiner

Group Art Unit

Title: Canopy-Like Decorative Structure

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Petition for Revival

Specification and Claims (15 pages)

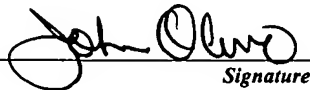
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CANOPY-LIKE DECORATIVE STRUCTURE

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of international application serial no. PCT/US02/23040, filed on July 19, 2002, designating the United States and published in English, which claims the benefit under 35 U.S.C. §119(e) of U.S. provisional patent application serial no. 60/306,516, filed on July 19, 2001.

BACKGROUND

[0002] The present invention relates generally to ceiling fixtures and, more particularly, to ceiling fixtures for suspension from a hard ceiling in an open plenum space.

[0003] Traditional suspended ceiling structures formed from suspended grids of acoustically absorbent tiles are commonly found in commercial work spaces such as professional offices. While such structures provide a pleasant and acoustically absorbent space, designers and architects who desire to create the feel of an open loft space often object to the uniformity and lowered ceiling height created by conventional drop ceilings. Thus, more and more businesses are opting for so-called open plenum ceiling designs. In the open plenum, no suspended ceiling is provided that screens the entire hard deck or hard ceiling along with the HVAC duct work, wiring and the like. Rather, these structural elements are exposed. Open plenum ceilings are more commonly found in retail stores and similar commercial settings, but also can be found in office spaces.

[0004] In office spaces where open plenum ceilings are found, individual offices within the office space often are created using reconfigurable partitions that may be considerably lower than the hard ceiling. Whether in an office space or some other in-door space, the combination of an open plenum design with partitions that do not rise to the ceiling hard deck tends to leave the space unstructured and, consequently, less useful and aesthetically pleasing than it might otherwise be with some decorative structure that helps to define and differentiate the space.

[0005] To differentiate a space and to create a more interesting visual in a loft style space or open plenum design, architects sometimes will specify that an open loft space be provided with customized decorative structures suspended from the ceiling to differentiate the space within the room. Such suspended decorative structures not only can delineate the space but also may dampen extraneous noise and create an interesting visual. Unfortunately, such decorative structures must be preformed into the desired shape, thus making them difficult to ship or mass produce. Consequently, such decorative structures tend to be made only as customized pieces. Such customization leads to considerable expense to fabricate such a suspended decorative structure and its framing.

[0006] Therefore, there is a need for a decorative structure that can be suspended within a space and that is structured such that its elements can be easily interchanged to provide a variety of configurations with basic elements some of which, at least, may be mass produced.

SUMMARY

[0007] The present invention provides a decorative structure including a flexible panel maintained in a flexed configuration. The decorative structure comprises a flexible panel supported by a cable that is connected to a biasing member. The biasing member cooperates with a portion of the flexible panel so as to maintain the panel in a flexed configuration. The

structure is suspended within an interior and/or exterior space by direct or indirect connection with a wall, ceiling, floor or other support structure. The cable may connect the biasing member to an opposed biasing member that also cooperates with the flexible panel. Alternatively, the biasing member may be connected to an opposed biasing member by a tensioned cable. The cable may be attached directly to the biasing member or indirectly to the biasing member with a fastener. In one embodiment, the cable may pass through a portion of the biasing member.

[0008] In one embodiment, the decorative structure comprises a biasing member having a cam that cooperates with the flexible panel. The flexible panel may be indirectly supported by a cable that is connected to the biasing member. The biasing member may cooperate with an edge of the flexible panel so as to maintain the panel in a flexed configuration.

[0009] In another embodiment, the biasing member comprises a jaw that receives a portion of the flexible panel. The jaw may be pivotal about a pivot point or joint.

[0010] The decorative structure may comprise one or more flexible panels that are supported by the same cable or a plurality of panels supported by a plurality of cables. The flexible panels may be comprised of a range of materials such as, for example, metal, wood, paper, plastic and/or glass.

[0011] The present invention also encompasses a method of configuring a decorative structure. The method comprises providing a cable connecting a biasing member to an opposed biasing member; engaging the biasing member with a first portion of a flexible panel; engaging the opposed biasing member with a second portion of the flexible panel; and, adjusting the relative alignment of the biasing member and the opposed biasing member. The method may also comprise the step of securing the alignment of the biasing member along the cable relative to the opposed biasing member, such as with an anchor connected to the biasing member and

cooperating with the cable, and/or tensioning a cable connecting a biasing member to an opposed biasing member.

[0012] These and other features of the present invention will become apparent upon reading the following detailed description, when taken in conjunction with the accompanying drawings that are briefly described as follows.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] Fig. 1 is a perspective view of a decorative structure embodying principles of the present invention.

[0014] Fig. 2 is a perspective view of an alternative configuration of the decorative structure of Fig. 1.

[0015] Fig. 3 is a perspective view of a biasing member for use in a decorative structure embodying principles of the present invention.

[0016] Fig. 4 is a perspective view of another biasing member for use in a decorative structure of embodying principles of the present invention.

[0017] Fig. 5 is a perspective view of a further biasing member for use in a decorative structure embodying principles of the present invention.

[0018] Fig. 6 is a perspective view of yet another biasing member for use in a decorative structure embodying principles of the present invention.

[0019] Fig. 7 is a side view of a portion of a decorative structure embodying principles of the present invention.

[0020] Fig. 8 is a side view of the portion of the decorative structure shown in Fig. 7 with the addition of a flexible panel.

[0021] Fig. 9 is a side view of the portion of the decorative panel shown in Fig. 8 with the decorative structure adjusted to a desired configuration.

[0022] Fig. 10 is a perspective view of another decorative structure embodying principles of the present invention.

[0023] Fig. 11 is a perspective view of a further decorative structure embodying principles of the present invention.

[0024] Fig. 12 is a perspective view of yet another decorative structure embodying principles of the present invention.

[0025] Fig. 13 is a perspective view of still a further decorative structure embodying principles of the present invention.

DETAILED DESCRIPTION

[0026] Referring now in greater detail to the figures, wherein like numerals refer to like parts throughout the drawings, the present invention generally includes a decorative structure comprising a flexible panel supported by a cable and maintained in a flexed configuration by a biasing member. The decorative structure provides a canopy-like visual element to a space in which it is suspended. The decorative structure may be easily installed and reconfigured to suit the user. The elements of the decorative structure may be interchanged in order to provide different visual and aesthetic impact. The flexible panel may be provide in a variety of shapes, materials and finishes. The flexible panel may be formed of wood, paper, metal, plastic, glass or any other suitable material. The panel may be solid, mesh or include a variety of decorative designs or openings therein to provide the desired visual impact.

[0027] A decorative structure 100a is shown in Fig. 1. The decorative structure 100a includes a flexible panel 20 having a first edge 24 and a second edge 22. The decorative structure 100a also includes cables 30 connected to biasing members 50a and 50b and supporting flexible panel 20. Cables 30 are connected to the ceiling, walls or some other suitable structure from which the decorative structure 100a may be suspended. Biasing members 50a cooperate with a portion of flexible panel 20, such as, for example, first edge 24. Likewise, opposed biasing members 50b cooperate with second edge 22 of flexible panel 20. The cooperation of biasing members 50a with first edge 24 of flexible panel 20 and opposed biasing members 50b with second edge 22 provides support for the flexible panel and maintenance of the flexible panel 20 in a flexed configuration. Each biasing member 50a is connected to an opposed biasing member 50b by tensioned cable 34. Tensioned cable 34 provides a counter force through biasing members 50a and opposed biasing members 50b to the flexible panel 20 when it is in a flexed configuration. By employing tensioned cables 34 and biasing members 50a and opposed biasing members 50b, an otherwise flat but flexible panel 20 may be bowed to a desired configuration when decorative structure 100a is installed. Therefore, production, shipping and handling of the elements of the decorative structure may prove easier than with a customized structure having a preformed curved configuration.

[0028] As shown in Fig. 2, alternative configurations for flexible panel 20 can be had. In this embodiment of the present invention, tensioned cables 34 are positioned below flexed panel 20. As in decorative structure 100a, cables 30 are connected to biasing members 50a and opposed biasing members 50b, thereby at least indirectly supporting flexible panel 20, which cooperates with both biasing member 50a and opposed biasing members 50b. Thus, the present invention encompasses flexible panels that can be configured concave and/or convex.

[0029] Fig. 3 shows a biasing member 50 that embodies principles of the present invention. Biasing member 50 includes a body 52 that has a groove 54 formed therein. Groove 54 includes a major biasing surface 58. When an edge of a flexible panel is received by groove 54 major biasing surface 58 cooperates with a face of the flexible panel while the end surface 53 of groove 54 cooperates with an edge of the flexible panel so that the panel is biased in a predetermined direction. The flexible panel received by groove 54 may include a notch (not shown) in an edge thereof that may receive cable 30, when a portion of the cable extends through the groove 54 as shown in Figs. 3 and 4. Biasing member 50 is connected to cable 30, which supports both the biasing member and any panel that may be cooperating with the biasing member. As shown in Fig. 3, support cable 30 may extend through the body 52 of biasing member 50, which includes apertures 56 that receive the cable 30. Apertures 56 may be formed in the body 52 so that cable 30 extends through a portion of groove 54, as shown in Fig. 3, or, alternatively, they may be formed such that cable 30 does not extend through groove 54.

[0030] The present invention encompasses decorative structures that include separate support and tensioned cables, as well as decorative structures that include cables that perform the function of both support and tensioning. As shown in Fig. 3, cable 30 is connected to biasing member 50 in such a manner as to both support the biasing member and tension a flexed panel that is received in groove 54. Biasing member 50 may be adjustably positioned along the length of cable 30 by disengaging anchor 60 through which cable 30 extends and to which biasing member 50 is connected. In order to reposition biasing member 50, anchor 60 is adjusted so as to at least partially disengage from cable 30 so as to allow movement of both anchor 60 and biasing member 50 along the cable. Once biasing member 50 is placed in the desired position, anchor 60 may be adjusted to reengage cable 30 so as to hold biasing member 50 in place on

cable 30. Biasing member 50 may be made of any appropriate durable material such as metal or a polymeric resin. Cable 30 and/or tensioned cable 34 may also be made of any appropriate material, such as metal, synthetic or natural polymers.

[0031] As shown in Fig. 4, a biasing member 150 may be provided with a decorative structure of the present invention so as to form an angle within cable 30. Biasing member 150 includes a body 152 that has an angled aperture 156 formed therein. Cable 30 is inserted through aperture 156 so that cable 30 is angled. Depending upon the desired configuration of the decorative structure of the present invention, angled channel 156 may be formed at any appropriate angle. Furthermore, the present invention encompasses other interconnections of the biasing member and cable so as to provide an angle along the cable.

[0032] Fig. 5 shows yet another embodiment of a biasing member of the present invention. Biasing member 250 includes a body 252 generally formed as a cam. Cable 30 extends through a channel formed in body 252 and anchor 60. Body 252 includes a major cam or biasing surface 258 that cooperates with a portion of a flexible panel in order to bias the panel and maintain the panel in a flexed configuration.

[0033] The present invention also encompasses a decorative structure that includes a biasing member having a jaw. Fig. 6 shows a biasing member 350 that includes a jaw 355 extending from a body 352 thereof. Jaw 355 is connected by a neck 351 to a pivot joint 353 that allows for pivoting of the jaw 355. As with the other biasing members described above, jaw 355 includes a major jaw biasing surface 358 that cooperates with a portion of a flexible panel to both bias the panel and maintain it in a flexed configuration. Biasing member 350 is connected to an anchor 60 so that biasing member 350 may be adjustably positioned along the length of cable 30.

[0034] In each of the embodiments of the biasing member of the present invention described above, a cable may extend through a portion of the body of the biasing member as shown in Figs. 3-6 or, alternatively, one or more cables may be connected to the biasing member by other means. For example, an eyelet (not shown) may be fastened to or formed in the biasing member. The cable may be connected to the eyelet. These and other fasteners connecting the biasing member to the cable are contemplated by the present invention.

[0035] The present invention also encompasses a method for configuring a decorative structure. As shown in Figs. 7-9, the method comprises the steps of providing a biasing member 50a connected to an opposed biasing member 50b by a cable 30, as shown in Fig. 7. The method further comprises engaging a portion of a flexible panel 20 with the biasing member 50a and engaging another portion of the flexible panel with the opposed biasing member 50b. For example, a first edge 22a of a flexible panel 20 may be inserted into groove 54a of biasing member 50a and a second edge 22b of flexible panel 20 may be inserted into a groove 54b of opposed biasing member 50b. If the biasing member and/or the opposed biasing member includes a jaw or a cam, then an edge or other portion of the flexible panel of the decorative structure may be inserted in the jaw or aligned adjacent the cam in order to accomplish these step. The alignment of the biasing member relative to the opposed biasing member then may be adjusted to bend the flexible panel into the desired flexed configuration. For instance, as indicated in Fig. 9, biasing member 50a and/or biasing member 50b may be moved along cable 30 thereby altering the extent of flexure of flexible panel 20.

[0036] When the desired configuration is achieved, the method may then include securing the biasing member and the opposed biasing member relative to the cable. For example, the anchors 60a and 60b connected to biasing members 50a and 50b respectively may be disengaged from

cable 30 as the biasing members are repositioned and then reengaged with the cable when the desired alignment is achieved. The method may also include tensioning the cable in order to provide proper alignment of the biasing member relative to the opposed biasing member.

[0037] As shown in Figs. 10-13, the decorative structures of the present invention may include a variety of configurations and materials. For example, as shown in Fig. 11, two cables 30 may be aligned in parallel and a plurality of flexible panels 20 and biasing members 50 may be arranged thereon. In such a configuration, cables 30 serve both to support flexible panels 20 and provide the necessary tensioned counter force through the biasing members to maintain the flexible panels 20 in their respective flexed configurations. It is contemplated that a plurality of decorative structures may be provided in a given space and/or a decorative structure may include a plurality of configured flexible panels.

[0038] The decorative structure of the present invention also may provide hinged access to the space above the structure without completely disassembling the structure. The panel may be hingedly or pivotally rotated by loosening the anchors connected to one or more of the biasing members that engage a given panel. For example, in the case of decorative structure shown in Fig. 13, the anchors connected to biasing members 50b may be loosened so that the biasing members may be moved along the cables 30. Movement of the biasing members 50b will allow the panel 20a to be disengaged therefrom. The panel may then be rotated upward about an axis extending through biasing members 50a so that the space above the decorative structure may be accessed without removing portions of the structure.

[0039] As is shown in the figures, the ends of the flexible panel may be positioned at different heights and orientations relative to each other in order to provide a wide variety of visual and acoustical results. While the biasing members shown in the figures are completely supported by

one or more cables, the present invention also encompasses decorative structures wherein one or more biasing members are supported by a structure other than a cable. For example, a biasing member may be supported by a rod, beam, pipe, wall, ledge or other suitable structure, while still functioning as intended according to the present invention.

[0040] Furthermore, the decorative structures of the present invention may be used in conjunction with a light source in order to illuminate the space in which the structure is suspended. The light may be integrally formed with the decorative structure, such as being supported by one or more of the structures cables, or be positioned adjacent the structure in order for the flexible panel to act as a reflector, diffuser or shade for a light source. These and many other modifications to the embodiments illustrated herein may well be made without departing from the spirit and scope of the present invention.

What is claimed is:

1. A decorative structure comprising:
a flexible panel;
a biasing member cooperating with a portion of said flexible panel, wherein said flexible panel is maintained in a flexed configuration; and,
a cable connected to said biasing member and supporting said flexible panel.
2. The decorative structure of claim 1, wherein said biasing member comprises a body having a groove receiving said portion of said flexible panel.
3. The decorative structure of claim 1, wherein said cable extends through a portion of said biasing member.
4. The decorative structure of claim 1, wherein said biasing member comprises a cam cooperating with said flexible panel.
5. The decorative structure of claim 1, wherein said biasing member comprises a jaw cooperating with said flexible panel.
6. The decorative structure of claim 5, wherein said jaw is pivotable about a pivot joint.

7. The decorative structure of claim 1, wherein said flexible panel is formed of a material selected from metal, wood, fabric, and plastic.

8. The decorative structure of claim 1, further comprising an opposed biasing member cooperating with said flexible panel.

9. The decorative structure of claim 1, further comprising a tensioned cable cooperating with said biasing member to maintain said flexible in said flexed configuration.

10. The decorative structure of claim 9, wherein said tensioned cable connects said biasing member to an opposed biasing member.

11. The decorative structure of claim 1, wherein said biasing member forms an angle in said cable.

12. The decorative structure of claim 1, further comprising an anchor connected to said biasing member and cooperating with said cable.

13. A method of configuring a decorative structure comprising:
providing a cable connecting a biasing member to an opposed biasing member;
engaging the biasing member with a first portion of a flexible panel;
engaging the opposed biasing member with a second portion of the flexible panel; and
adjusting the relative alignment of the biasing member and the opposed biasing member.

14. The method of claim 13, further comprising:
securing the alignment of the biasing member along the cable relative to the opposed
biasing member.

15. The method of claim 14, wherein an anchor connected to the biasing member
engages the cable.

16. The method of claim 14, further comprising the step of tensioning the cable.

ABSTRACT

A decorative structure is provided that is suspended within a space and includes a flexible panel maintained in a flexed configuration. The decorative structure includes a cable that supports the flexible panel and that is connected to a biasing member. The biasing member cooperates with a portion of the flexible panel to maintain the panel in a flexed configuration. A method of configuring a decorative structure with a flexed panel is also provided.

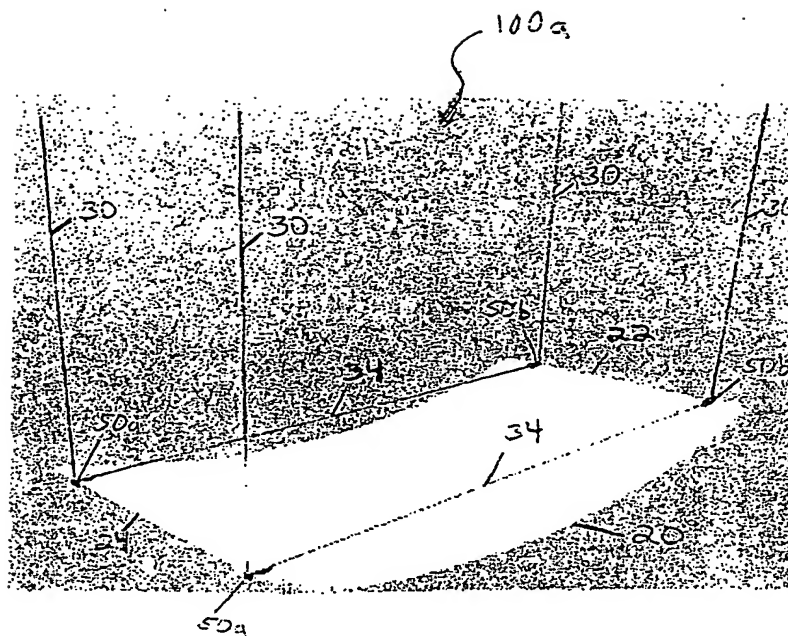


Fig 1

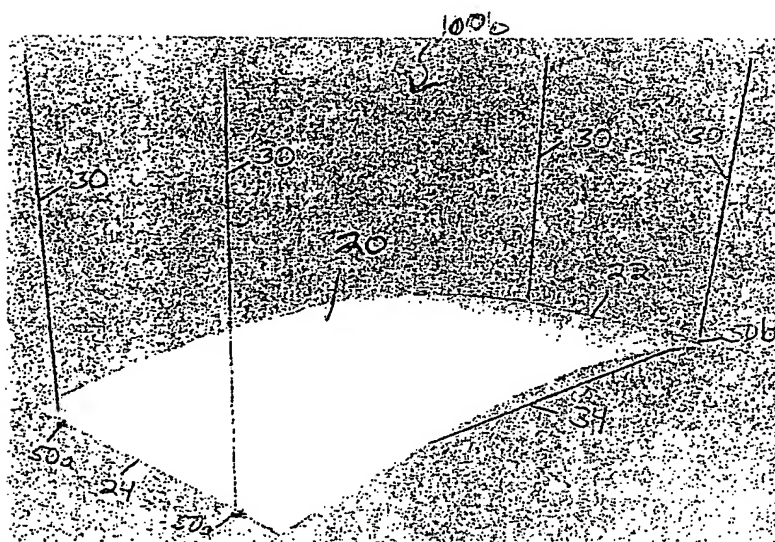


Fig 2

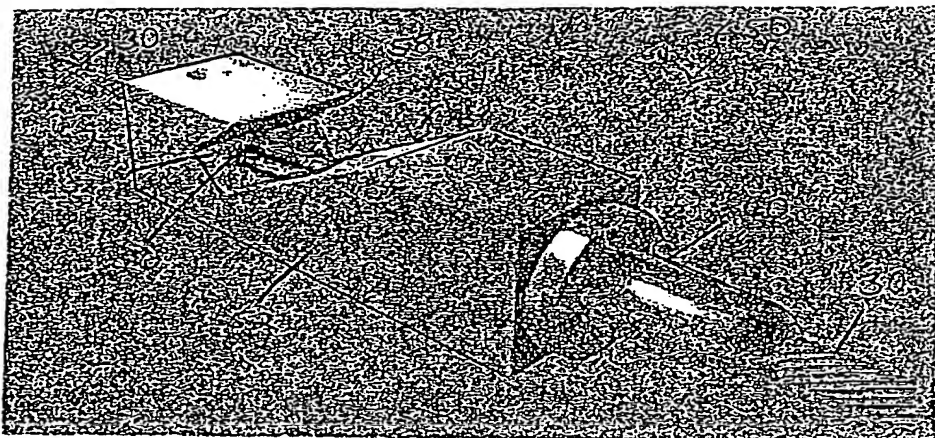


Fig. 3

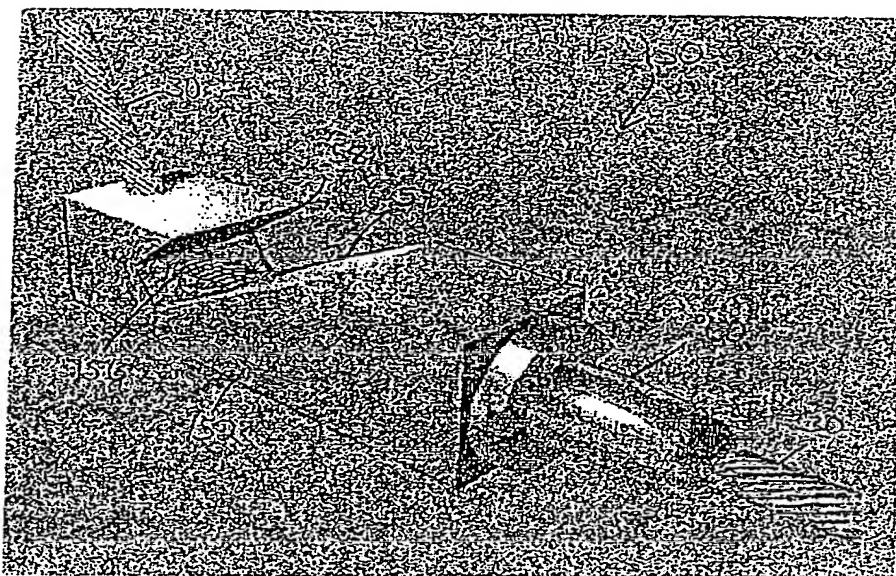


Fig 4

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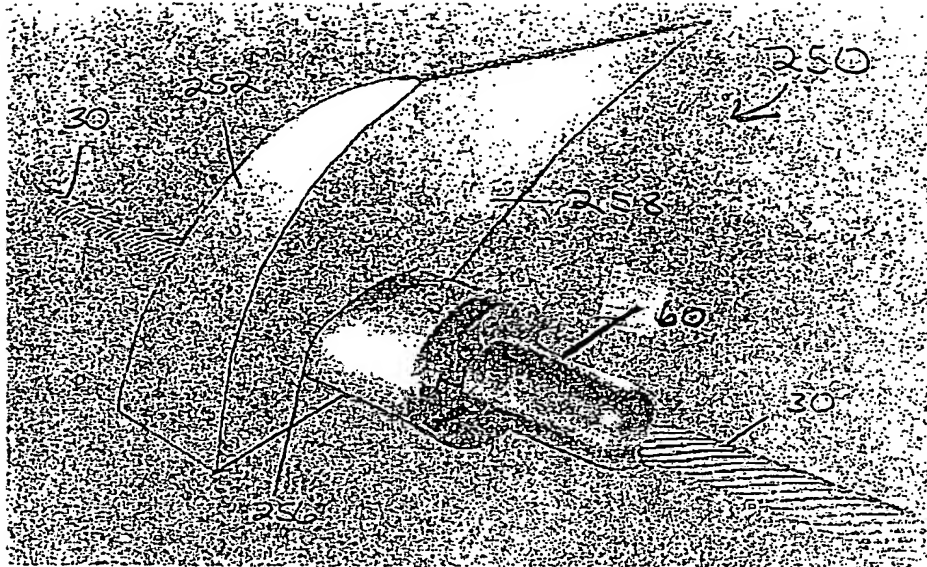


Fig 5

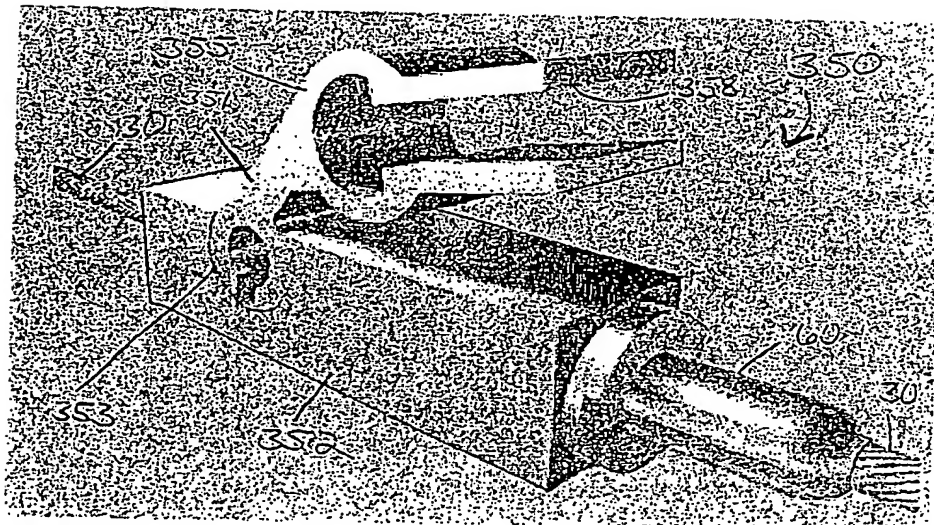


Fig 6

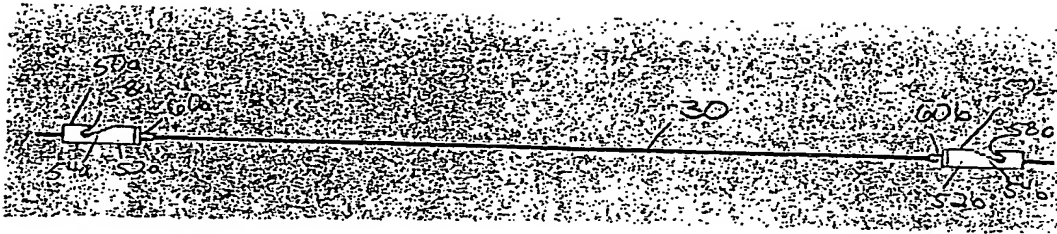


Fig 7

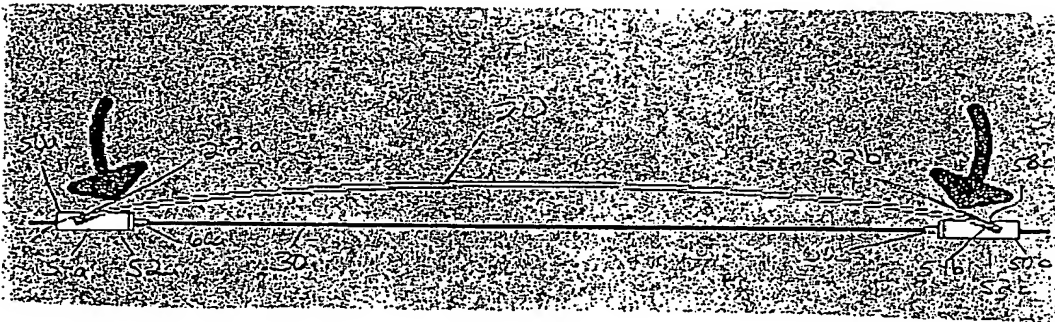


Fig 8

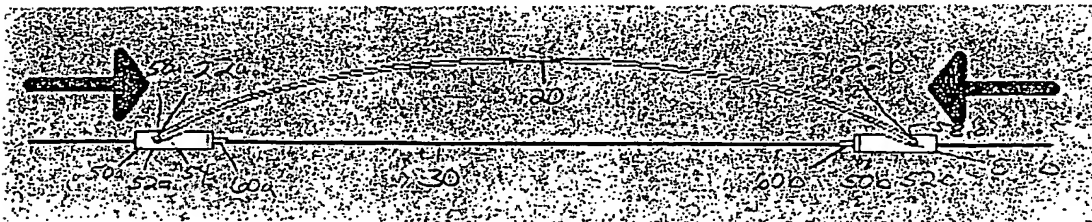


Fig 9

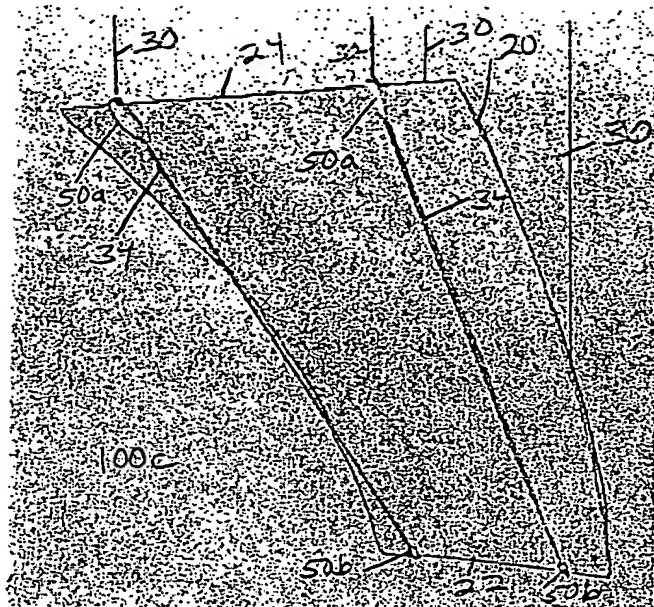


Fig 10

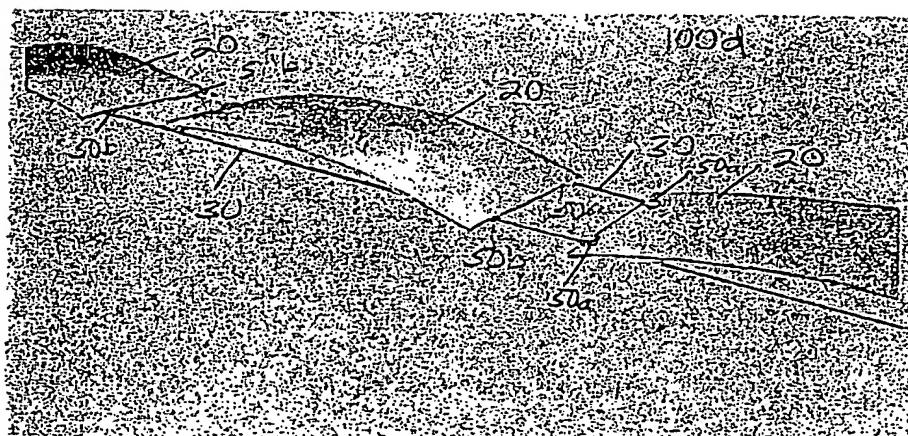


Fig 11

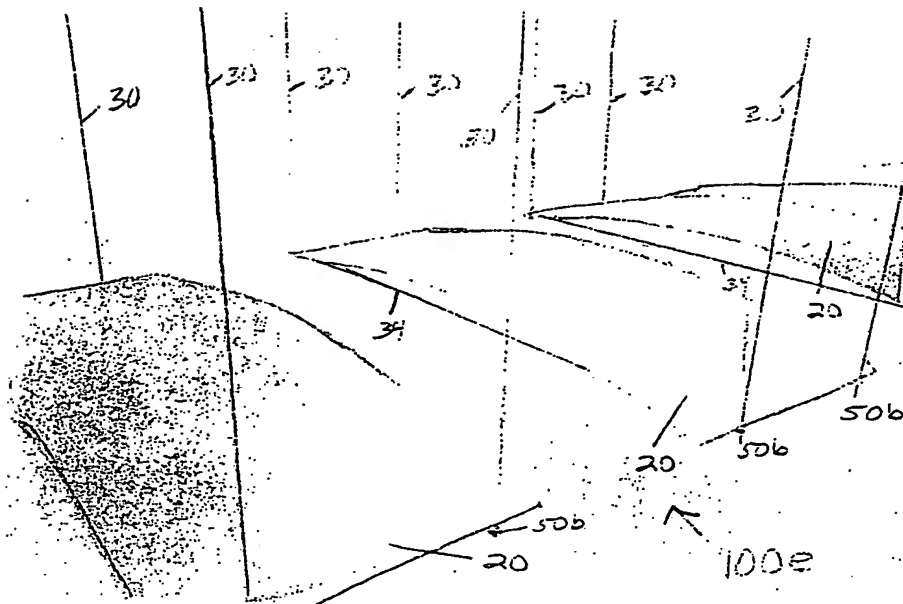


Fig 12

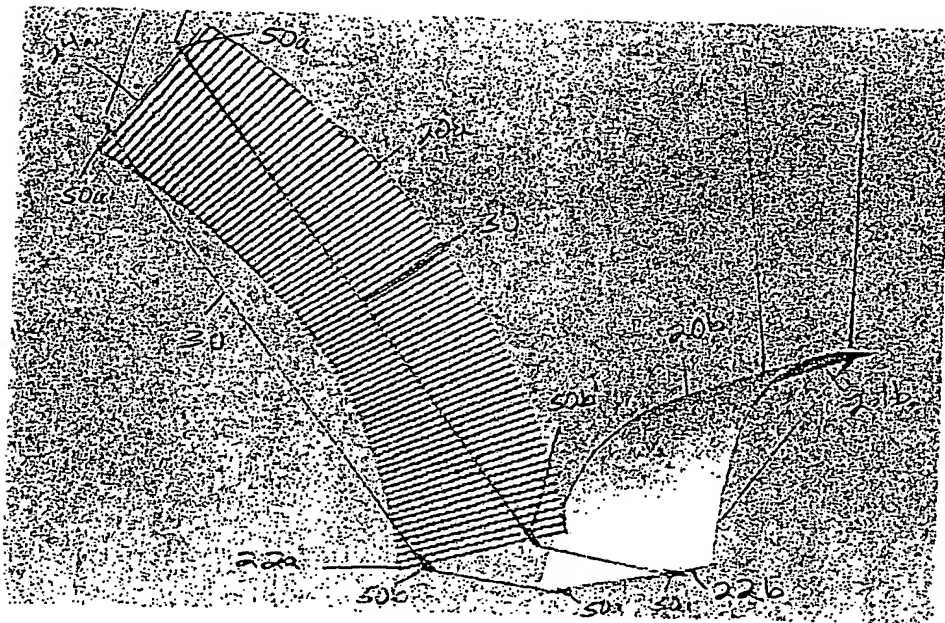


Fig 13